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CLAIMS

WHAT IS CLAIMED IS:

1. A genetically engineered mammalian cell that has
5 been mutated by a process comprising the insertion of a
recombinantly manipulated polynucleotide sequence into a
gene in said genetically engineered mammalian cell wherein
said gene is identifiable as corresponding to at least one
of SEQ ID NOS: 1-891.

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2. The genetically engineered mammalian cell of
Claim 1, wherein said cell is murine.

15 3. A cell according to Claim 2, wherein said cell is
an embryonic stem cell.

4. The genetically engineered mammalian cell of
Claim 1, wherein said polynucleotide sequence is present on
a viral vector.

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5. A cell according to Claim 4, wherein said viral
vector is a retroviral vector.

25 6. A cell according to Claim 4, wherein said viral
vector additionally comprises regions of targeting DNA that
facilitate gene targeting by homologous recombination.

30 7. An isolated murine embryonic stem cell line
comprising an engineered retroviral gene trap vector in at
least one gene comprising a polynucleotide sequence first
disclosed in one of SEQ ID NOS: 1-891.